# ANNEX A

(Clauses Foreword, 2, 3.0, 4.1.4, 4.3.1 and 4.7.2.4)

## LIST OF INDIAN STANDARDS RELATED TO AERIAL ROPEWAYS

		IS No.	Title
A-1 STANDA	RDS FOR RAW MATERIALS	1161:1979	Steel tubes for structural
A-1.1 Alumini IS No.	ium and Aluminium Alloys  Title	1239	purposes (third revision)  Mild steel tubes, tubulars and other wrought steel fittings
617:1994	Aluminium and aluminium alloy	(Part 1): 1990	Mild steel tubes (fifth revision)
	ingots and castings for general engineering purposes (third revision)	(Part 2): 1992	Mild steel tubulars and other wrought steel pipe fittings (fourth revision)
733 : 1983	Wrought aluminium and aluminium alloy bars, rods, and sections for general engineering	1570: 1961 (Part 1): 1978	Schedules for wrought steels for general engineering purposes  Steels specified by tensile and/or
738:1977	purposes (third revision) Wrought aluminium alloy drawn	(1 alt 1) . 1976	Steels specified by tensile and/or yield properties (first revision)
750.1577	tube for general engineering purposes (second revision)	(Part 2/Sec 1): 1979	Carbon steels (unalloyed steels), Section 1 Wrought products
2525 : 1982	Dimensions for wrought aluminium and aluminium alloys, wire (first revision)		(other than wire) with specified chemical composition and related properties (first revision)
2678:1987	Dimensions and tolerances for wrought aluminium and aluminium round	(Part 2/Sec 2): 1988	Carbon steels (unalloyed steels), Section 2 Carbon steel wires with related properties (first revision)
3965 : 1981	tube (second revision) Dimensions for wrought	(Part 3): 1979	Carbon and carbon manganese free cutting steels (first revision)
2	aluminium and aluminium alloy bar, rod and section (first revision)	(Part 4): 1988	Alloy steels (alloy constructional and spring steels) with specified
6051:1970	Code for designation of aluminium and its alloys		chemical composition and mechanical properties (first revision)
6477:1983	Dimensions for wrought aluminium and aluminium alloys, extruded hollow section (first	(Part 5): 1985	Stainless and heat resisting steels (second revision)
1 1 2 C/- I	revision)	(Part 7): 1992	Steels for elevated temperature service (creep resistant steels)
and Steel Prod	ds for Cast Iron, Cast Steel, Steel lucts	1730:1989	Steel plate, sheets, strips and flats for
IS No.	Title		structural and general engineering purposes — Dimensions (second
210:1993	Grey iron castings (fourth revision)		revision)
276:1992	Austenitic manganese steel castings (fourth revision)	1732:1989	Dimensions for round and square steel bars for structural and
808 : 1989	Dimensions for hot-rolled steel beam, column, channel and angle sections (third revision)	1852:1985	general engineering purposes (first revision) Rolling and cutting tolerances for
811 : 1988	Cold formed light gauge structural steel sections (revised)		hot-rolled steel products (fourth revision)
1030:1989	Carbon steel castings for general	1864 : 1979	Hot rolled steel L-sections for shipbuilding (first revision)
	engineering purposes (fourth revision)	1871	Commentary on Indian Standard schedules for wrought steels

IS No.	Title	IS No.	Title
(Part 1): 1987	Steels specified by Tensile and/or yield properties [Complementary	8800:1986	Technical delivery conditions for steel castings (second revision)
m • 100 <b>7</b>	to IS 1570 (Part 1): 1978] (first revision)	8910:1978	General technical delivery requirements for steel and steel
(Part 2): 1987	Carbon steels (unalloyed steels) [Complementary to IS 1570	A-1.3 Standard	products s for Welding
	(Part 2): 1979] (first revision)	IS No.	Title
(Part 3): 1987	Carbon and carbon manganese free cutting steels [Complementary to IS 1570 (Part 3): 1979]	812:1957	Glossary of terms relating to welding and cutting of metals
1977 : 1975	(first revision) Structural steel (ordinary quality) (second revision)	816:1969	Code of practice for use of metal arc welding for general construction in mild steel (first revision)
2049 : 1978	Colour code for the identification of wrought steels for general engineering purposes (first revision)	817:1966	Code of practice for training and testing of metal arc welders (revised)
2062:1992	Steel for general structural purposes (fourth revision)	817 (Part 1): 1992	Code of practice for training and testing of metal arc welders: Part 1 Manual metal arc welding
2107:1977	Whiteheart malleable iron castings (first revision)		(second revision)
2108:1977	Blackheart malleable iron castings (first revision)	818:1968	Code of practice for safety and health requirements in electric and gas welding and cutting
2640:1977	Pearlitic malleable iron castings (first revision)	010 105	operations (first revision)
2644 : 1989	High tensile steel castings for general engineering and structural purposes (fourth revision)	819:1957	Code of practice for resistance spot welding for light assemblies in mild steel
2707 : 1989	Carbon steel castings for surface hardening (third revision)	822:1970	Code of procedure for inspection of welds
3444 : 1987	Corrosion resistant alloy steel and nickel based castings for general applications (second	1024 : 1979	Code of practice for use of welding in bridges and structures subject to dynamic loading (first revision)
3502:1994	revision) Steel chequered plates (second revision)	1179 : 1967	Equipment for eye and face protection during welding (first revision)
3601:1984	Steel tubes for mechanical and general engineering purposes (first revision)	1201 . 1707	Code of practice for seam welding in mild steel
3954:1991	Hot-rolled steel channel sections for general engineering purposes		Code of practice for oxy-acetylene welding for structural work in mild steel (second revision)
4899 : 1991	(first revision)  Ferritic and martensitic steel		Code of practice for training and testing of oxy-acetylene welders
4923 : 1985	castings for use at low temperatures (second revision) Hollow steel sections for	2811:1987	Recommendations for manual tungsten inert-gas arc-welding of stainless steel (first revision)
<del>4</del> 723 . 1703	structural use (first revision)	2812 - 1993	Recommendation for manual
8500:1991	Structural steel — Microalloyed (medium and high strength qualities) (first revision)		tungsten inert-gas arc-welding of aluminium and aluminium alloys (first revision)

IS No.	Title	IS No.	Title
3016:1982	Code of practice for fire precautions in welding and cutting operations (first revision)	7318	Approval tests for welders when welding procedure approval is not required
3600	Methods of testing fusion welded	(Part 1): 1974	Fusion welding of steel
(Part 1): 1985	joints and weld metal in steel Cruciform fillet weld tensile test (second revision)	(Part 2): 1974	TIG or MIG welding of aluminium or its alloys
(Part 2): 1985	Beam impact (charpy V-notch) test (second revision)	9595 : 1980	Recommendations for metal arc welding of carbon and carbon manganese steels
(Part 3): 1984	Transverse tensile test (second revision)	A-2 STANDAL	RDS FOR DESIGN AND SAFETY
(Part 4): 1984	Longitudinal tensile test on	IS No.	Title
(Part 5) , 1002	cylindrical weld metal test pieces on butt welds (second revision)	800:1984	Code of practice for general construction in steel (second
(Part 5): 1983	Transverse root and face bend test on butt welds (second revision)	801 : 1975	revision)  Code of practice for use of cold
(Part 6): 1983	Transverse side bent test on butt welds (second revision)		formed light gauge steel structural members in general
(Part 7): 1985	Longitudinal root and face bend test on butt welds (second	000	building constructions (first revision)
(Part 8): 1985	revision)  Nick break test and fillet weld fracture test (second revision)	802	Code of practice for use of structural steel in overhead transmission line towers
(Part 9): 1985	Macro and micro examination (second revision)	(Part 1): 1977	Loads and permissible stresses (second revision)
3613:1974	Acceptance test for wire-flux combination for submerged arc welding (first revision)	(Part 1/Sec 2): 1992	Material, loads and permissible stress, Sec 2 Permissible stress (third revision)
4353:1995	Submerged-arc welding of mild steel and low alloy steels —	(Part 2): 1978	Fabrication, galvanizing, inspection and packing
4943 : 1968	Recommendations (first revision) Assessment of butt and fillet	(Part 3): 1978	Testing
1743.1700	fusion welds in steel sheet, plate and pipe	806 : 1968	Code of practice for use of steel tubes in general building construction (first revision)
5139 : 1995	Procedure for repair of cast iron castings by oxy-acetylene and manual metal arc welding — Recommendations (first revision)	807:1976	Code of practice for design, manufacture, erection and testing (structural portion) of cranes and hoists (first revision)
5530 : 1987	Recommendations for production, rectification and repair of steel castings by metal	4000:1992	High strength bolts in steel structures — Code of practice (first revision)
6916 : 1973	arc welding process (first revision)  Code of practice for fabrication welding of steel casting	4573:1982	Power driven mobile cranes (first revision)
7307 (Part 1): 1974	Approval tests of welding	4594:1968	Code of practice for design of portal and semi-portal wharf cranes (electrical)
7310 (Part 1): 1974	Approval testing of welders working to approval welding procedure: Part 1 Fusion welding of steel	6511:1972	Range of preferred safe working loads for cranes, lifting appliances and related excavator equipment

A-3 STANDA PROTECTION	RDS ON CORROSION	IS No	Title
IS No.	Title	9047	Data sheet for aerial ropeways and cableways
3531:1983	Glossary of terms relating to corrosion of metals (first revision)	(Part 1): 1979	Data to be supplied by intending purchaser for aerial system for transportation of goods
3618:1966	Phosphate treatment of iron and steel for protection against corrosion	(Part 2): 1980	Data to be supplied by intending purchaser for aerial system for transportation of passengers,
4180:1967	Code of practice for corrosion protection for light gauge steel sections used in building	(Part 6): 1980	surface Data to be supplied by intending
4777 : 1968	Performance tests for protection schemes used in protection of light gauge steel against corrosion	0000 4050	purchaser for aerial system for transportation of forestry products
5555: 1970	Code of procedure for conducting field studies on atmospheric	9228 : 1979 9413 : 1980	Mono seat chairs for chairlifts used in winter sports  Rope guide rollers for haulage
6005:1970	corrosion of metals  Code of practice for phosphating of iron and steel		ropes of bicable aerial ropeways for transportation of goods
8221 : 1976	Code of practice for corrosion prevention of metal and metal	9454 : 1980	Bicable load carrier for aerial ropeways
0.000	components in packages		on Wire Ropes and Wire Products
8629	Code of practice for protections of iron and steel structures from atmospheric corrosion	<i>IS No</i> . 1804 : 1982	Title  Fibre cores for steel wire ropes (second revision)
(Part 1): 1977	General principles of corrosion and its prevention	2265 : 1978	Galvanized steel wire strand for signalling purposes (first revision)
(Part 2): 1977 (Part 3): 1977	Pretreatment Protection schemes	2315:1978	Thimbles for wire ropes (first
8 80	RDS FOR MECHANICAL	2361:1994	revision)  Buldog grips — Specification (second revision)
A-4.1 Standard	ls on Aerial Ropeways	2363:1981	Glossary of terms relating to wire
IS No.	Title	2485 : 1979	ropes (first revision)  Drop forged sockets for wire
5228 : 1969	Code of practice for construction of continuous movement monocable ropeways with fixed	2403.1777	ropes for general engineering purposes (first revision)
	grips intended for transportation of passengers	3121:1981	Rigging screws and stretching screws (first revision)
5229:1969	Code of practice for construction of continuous movement	3937	Recommendations for socketing of wire ropes
<b>5000</b> 4060	monocable ropeways with automatic grips intended for transportation of passengers	(Part 1): 1974 (Part 2): 1974	Socketing with zinc (first revision) Socketing with white metal (first revision)
5230 : 1969	Code of practice for construction of continuous to-and-fro movement bicable ropeways intended for transportation of	3973:1984	Code of practice for the selection, installation and maintenance of wire ropes (first revision)
	passengers	5245	Method for splicing of wire ropes
7649 : 1975	Glossary of terms used in connection with aerial ropeways and cableways	(Part 1): 1969 (Part 2): 1971	Hand splicing of wire ropes Wire rope sling legs with ferrule secured eye terminals
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IS No.	Title	IS No.	Title
6594 : 1977	Technical supply conditions for steel wire ropes and strands (first revision)	(Part 9): 1979	Surface discontinuities on bolts, screws and studs (second revision)
10891	Steel wire ropes for aerial ropeways	(Part 10): 1979	T Surface discontinuities on nuts (second revision)
(Part 1): 1984	Haulage ropes	(Part 12): 1981	Phosphate coatings on threaded fasteners (second revision)
(Part 2): 1986		(Part 13): 1983	Hot-dip galvanized coatings on
A-4.3 Standar IS No.	rds on Fasteners  Title	le le	threaded fasteners (second revision)
549:1974	Split pins (second revision)	(Part 14): 1984	Stainless steel threaded fasteners
1363	Hexagon head bolts, screws and nuts of product grade C		(second revision)
(Part 1): 1992			(first revision)  Marking and mode of delivery
(Part 2): 1992	5 71	1929:1982	(second revision)
(Part 3): 1992		1929 . 1962	Hot forged steel rivets for hot closing (12 to 36 mm diameter) (first revision)
1364	Hexagon head bolts, screws and nuts of product grade A and B	2155:1982	Cold forged solid steel rivets for hot closing (6 mm to 16 mm
(Part 1): 1992	Hexagon head bolts (size range	2505 1060	diameter) (first revision)
(Part 2): 1992	M1.6 to M64) (third revision) Hexagon head screws (size range M1.6 to M64) (third revision)	2585 : 1968	Black squares bolts and nuts (dia range 6 to 39 mm) and black square screws (dia range 6 to 24
(Part 3): 1992	Hexagon nuts (size range M1.6 to M64) (third revision)	2614:1969	mm) (first revision) Methods for sampling of fasteners
1367	Technical supply conditions for threaded steel fasteners	2687:1991	(first revision)  Cap nuts — Specification (second
(Part 1): 1980	Introduction and general information (second revision)	3063:1994	revision) Fastner — Single coil rectangular
(Part 2): 1979	Product grades and tolerances (second revision)		section spring washers (second revision)
(Part 3): 1991	Mechanical properties and test methods for bolts, screws and	3138:1966	Hexagonal bolts and nuts (M42 to M150)
	studs with full loadability (third revision)	3757:1985	High strength structural bolts (second revision)
(Part 5): 1980	Mechanical properties and test		ISO metric screw threads
127	methods for set screws and similar threaded fasteners not under tensile stresses (second revision)	(Part 1): 1976	Basic and design profiles (first revision)
(Part 6): 1994	Mechanical properties and test methods for nuts with specified	(Part 2): 1976	Diameter pitch combinations (first revision)
(Part 7) : 1980	proof loads (second revision)  Mechanical properties and test	(Part 3): 1976	Basic dimensions for design profiles (first revision)
	methods for nuts without specified	EXCEPTION OF THE PROPERTY OF T	Tolerancing system (first revision)
(Part 8): 1992	proof loads (second revision)  Mechanical and perform		Tolerances (first revision)
	Mechanical and performance properties for prevailing torque type steel haxagon nuts (second revision)	(Part 6): 1978	Limits of sizes for commercial colts and nuts (dia range 1 to 52 mm) (first revision)

A-4.4 Standard	ls on Bearings	IS No.	Title
IS No.	Title	692:1994	Paper insulated lead-sheathed
2398:1967	Identification code for rolling bearings	SS.	cables for rated voltage up to and including 33 kV (third revision)
3090:1965	Code of practice for installation and maintenance of rolling bearings	694:1990	PVC insulated cables for working voltages up to and including 1 100 volts (third revision)
5669:1987	General plan of boundary dimensions for radial rolling bearings (first revision)	1255 : 1983	Code of practice for installation and maintenance of power cables up to and including 33 kV rating (second revision)
5932:1970	Boundary dimensions for thrust ball bearings with flat seats	3961	Recommended current ratings for cables
6453 : 1984	Technical supply conditions for rolling bearings (first revision)	(Part 1): 1967	Paper-insulated lead-sheathed cables
6454:1972	Self aligning roller bearings	(Part 2): 1967	PVC-insulated and PVC
6455:1972	Single row radial ball bearings		sheathed heavy duty cables
6456: 1972	Double row radial ball bearings	(Part 3): 1968	Rubber insulated cables
6457:1972	Single row cylindrical roller	(Part 4): 1968	Polyethylene insulated cables
(450 - 1072	bearings	(Part 5): 1968	PVC insulated light duty cables
6458 : 1972	Double row cylindrical roller bearings	4288 : 1988	PVC insulated (heavy duty) electric cables with solid
7461 (Part 1): 1993	General plan of boundary dimensions for tapered roller bearings: Part 1 Single row		aluminium conductors for voltages upto and including 1 100 volts (second revision)
	bearings (second revision)	7093:1973	Straight through joint boxes and
A-5 STANDA COMPONENT	RDS ON ELECTRICAL S		lead sleeves for paper insulated lead-sheathed cables up to and including 1 1 kV
A-5.1 Standard	ds for Cables	9968	Elastomer insulated cables
<i>IS No.</i> 282 : 1982	Title  Hard drawn copper conductors	(Part 1): 1988	For working voltages upto and including 1 100 V (first revision)
202.1702	for overhead power transmission (second revision)	(Part 2): 1981	For working voltages from 3.3 kV upto and including 11 kV
398	Aluminium conductors for overhead transmission purposes	A-5.2 Standard	ds on Electrical Installations
(Part 1): 1976	Aluminium stranded conductors	IS No.	Title
85 95	(second revision)	732:1989	Code of practice for electrical
(Part 2): 1976	gaivanized steel reinforced		wiring installations (third revision)
(Part 3): 1976	(second revision)  Aluminium conductors aluminized steel reinforced	900 : 1992	Code of practice for installation and maintenance of induction motors (second revision)
(Part 4): 1994	(second revision) Aluminium alloy stranded	1944	Code of practice for lighting of public thoroughfare
N	conductor (aluminium magnesium silicon types) (third revision)	(Part 1 and 2): 1970	For main and secondary roads (Group A and B) (first revision)
(Part 5) : 1992	Aluminium conductors — Galvanized steel reinforced for extra high voltage (400 kV and above) (first revision)	(Part 5): 1981	Lighting for grade separated junctions, bridges and elevated roads (Group D) (first revision)

IS No.	Title	IS No.	Title
(Part 6): 1981	Lighting for towns and city centres and area of civic	3553:1966	Watertight electric lighting fittings
	importance (Group E) (first revision)	3646	Code of practice for interior illumination
(Part 7): 1981	Lighting for roads with special requirements (Group F)(first revision)	(Part 1): 1992	General requirements and recommendations for working interiors (first revision)
2309 : 1989	Practice for the protection of buildings and allied structures	(Part 2): 1966	Schedule for values of illumination and glare index
0551 1000	against lighting — Code of practice (second revision)	(Part 3): 1968	Calculations of coefficients of utilization by the B2 method
2551 : 1982	Danger notice plates (first revision)	4012:1967	Dust-proof electric lighting fittings
3043:1987	Code of practice for earthing (first	4013:1967	Dust-tight electric lighting fittings
5216	revision) Guide for safety procedures and	6665: 1972	Code of practice for industrial lighting
(Part 1): 1982	practices in electrical works  General (first revision)	6701:1985	Tungsten filament miscellaneous electric lamps (first revision)
(Part 2): 1982	Life saving techniques (first		ards on Rotating Machines,
	revision)	Switchgear, Tra	
8061 : 1976	Code of practice for design, installation and maintenance of	IS No.	Title Three phase industion maters
	service lines up to and including 650 V	325 : 1978	Three-phase induction motors (fourth revision)
	ls on Illumination	1231 : 1974	Dimensions of three-phase foot-mounted induction motors (third revision)
<i>IS No.</i> 418 : 1978	Title Tungsten filament general service	2223:1983	Dimensions of flange mounted ac
410.1770	electric lamps (third revision)	2052 1051	induction motors (first revision)
897:1982	Tungsten filament electric lamps for railways rolling stock (second revision)	2253 : 1974	Designations for types of construction and mounting arrangements of rotating electrical machines (first revision)
1913 (Part 1): 1978	General and safety requirements for luminaires: Part 1 Tubular fluorescent lamps (second	3151:1982	Earthing transformers (first revision)
	revision)	4237:1982	General requirements for
2418	Tubular fluorescent lamps for general lighting service		switchgear and controlgear for voltages not exceeding 1 000 V ac or 1 200 V dc (first revision)
(Part 1): 1977	Requirements and tests (first revision)	4691:1985	Degree of protection provided by enclosures for rotating electrical
(Part 2): 1977	Standard lamp data sheets (first revision)	4722 : 1992	machinery (first revision)  Rotating electrical machines (first
(Part 3): 1977	Dimensions of G-5 and G-13 bi-pin caps (first revision)		revision)
(Part 4): 1977	Go and no go gauges for G-5 and G-13 bi-pin caps (first revision)	4728 : 1975	Terminal marking and direction of rotation for rotating electrical machinery (first revision)
3287:1965	Industrial lighting fittings with plastic reflectors	8223:1976	Dimensions and output ratings for foot-mounted rotating
3528:1966	Waterproof electric lighting fittings		electrical machines with frame numbers 355 to 1 000

IS No.	Title	IS No.	Title
8789 : 1978	Values of performance characteristics for three-phase induction motors	1646 : 1982	Code of practice for fire safety of buildings (general): Electrical installations (first revision)
9320:1979	Guide for testing of direct current (dc) machines	1892:1979	Code of practice for subsurface investigations for foundations (first revision)
10118	Code of practice for selection, installation and maintanance of switchgear and controlgear	1904 : 1986	Code of practice for design and construction of foundations in
(Part 1): 1982	General		soils: General requirements (third
(Part 2): 1982	Selection	2440 - 1075	revision)
(Part 3): 1982	Installation	2440 : 1975	Code of practice for daylighting of buildings (second revision)
(Part 4): 1982	Maintanance	2974 (Part 3):	Design and construction of
13947	Low-voltage switchgear and control gear	1992	machine foundations — Code of practice: Part 3 Foundations for
(Part 1): 1993	General rules		rotary type machines (medium
(Part 4/Sec 1): 1993	Contactors and motor starters, Sec 1 Electromechanical contactors and motor starters.		and high frequency) (second revision)
A-6 Standards	on Building Construction	2974 (Part 4) : 1979	Code of practice for design and construction of machine
IS No.	Title	1919	foundations: Part 4 Foundations
456: 1978	Code of practice for plain and reinforced concrete (third		for rotary type machines of low frequency (first revision)
875	revision)  Code of practice for design loads	3103 : 1975	Code of practice for industrial ventilation (first revision)
	(other than earthquake) for buildings and structurs	3614 (Part 1): 1966	Fire-cheek doors: Part 1 Plate, metal covered and rolling type
(Part 1): 1987	Deadloads — Unitweights of building material and stored materials (second revision)	4326 : 1988	Earthquake resistant design and construction of buildings — Code of practice (second revision)
(Part 2): 1987	Imposed loads (second revision)	4351:1976	Steel door frames (first revision)
(Part 3): 1987	Wind loads (second revision)	4912:1978	Safety requirements for floor and
(Part 4): 1987 (Part 5): 1987	Snow loads (second revision)  Special loads and load		wall openings, railings and toe boards (first revision)
1038 : 1983	combinations (second revision)  Specification for steel doors.	4913 : 1968	Code of practice for selection, installation and maintenance of timber doors and windows
	windows and ventilators (third revision)	5533:1969	Recommendation for dimensions of spaces for human activities
1080 : 1995	Code of practice for design and construction of shallow foundation on soil (other than	6313	Code of practice for anti-termite measures in buildings
	raft, ring and shell) (second revision)	(Part 1): 1981	Constructional measures (first revision)
1361 : 1978	Steel windows for industrial buildings (first revision)	(Part 2): 1981	Pre-constructional chemical treatment measures (first
1642 : 1989	Code of practice for fire safety of buildings (general): Details of construction (first revision)	(Part 3): 1981	revision) Treatment for existing buildings (first revision)
1643 : 1988	Code of practice for fire safety of buildings (general): Exposure hazard (first revision)		( a de l'el tallelle)